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WHERE ARE THEY BEING TREATED?

A STUDY OF STD TREATMENT
SEEKING BEHAVIOR AMONG
ADOLESCENT STUDENTS IN
ASUOGYAMAN DISTRICT
EASTERN REGION



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A DISSERTATION PRESENTED TO THE SCHOOL OF PUBLIC
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DEDICATION

Dedicated to my dear wife and children who gave me a lot of support and encouragement throughout my course.



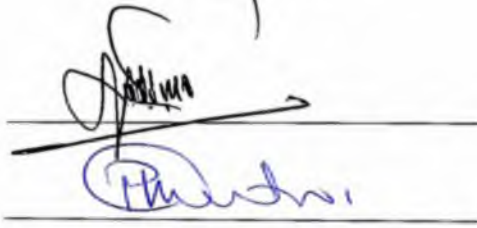
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DECLARATION

I, Dr. Kwaku Gyamfi Yeboah do declare that this dissertation was produced from research carried out by me under the supervision of Mr. S. A. Amoah and Dr. Phyllis Antwi.

Dr. G. K. Yeboah.

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ABSTRACT

A study to determine some factors that affected STD treatment seeking behaviour among adolescents students in Senior Secondary School was carried out in the Asuogyaman District of the Eastern Region of Ghana in May 1997.

In all 62 students who had suffered STDs in the past were respondents to the questionnaire.

Seventy one percent (71%) of respondents were males and 85.5% of respondents were aged between 17 and 20 years. 62% usually lived in a rural area.

All respondents had some knowledge about STDs and each could mention at least one STD. Forty percent (40%) knew AIDS as an STD and 95% attributed STD's to having sex with an infected individual.

The study revealed that 93% of respondents perceived a hospital/clinic as the best source of STD treatment and yet only 34% actually sought treatment from a hospital/clinic during their STD episode.

Some reasons for this apparent discrepancy were that of high charges, inconvenience in the use of hospital/clinic and the wish of the afflicted to conceal their identity to avoid embarrassment.

Other sources of treatment used by the remaining 66% were self-medication, herbalists, nurse acquaintance, friends. Chemical shops were the most common source used by respondents.

Majority of respondents (82%) perceived that STD treatment should be sought immediately symptoms were noticed.

77% and 79% respectively preferred specialized STD clinics and a laboratory service prior to treatment. Short waiting time drug availability and confidentiality were factors that affected use of various STD services.

The findings from this study are consistent with the hypothesis that was made i.e. that treatment seeking behavior in STDs is both a function of attitudes towards disease and sex and the issues of accessibility and quality of health care facilities that deal with STDs.

The findings corroborate those in the literature review except for the place of residence where the study found a preponderance of respondents who usually lived in a rural area [9, 22].

It may be important to continue with efforts to demystify STDs and remove the stigma attached to it by constantly discussing them. Since only a third of the respondents actually used hospitals/clinics it may be useful to equip alternative care providers with requisite knowledge to effectively manage STDs. Quality of care in hospitals/clinics need to be improved to attract more STD patients.

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CHAPTER 1

1.0 INTRODUCTION

Sexually transmitted diseases affect over 300 million people worldwide annually. With the advent of HIV infection the burden of STD's has increased. Of all STDs, HIV/AIDS continues to have the greatest global impact, with an estimated 20 million adults currently affected (1). At least 333 million new cases of other STDs occurred in 1995 [1]. STDs have been shown to facilitate acquisition and transmission of HIV by between 2 - 9 times [1].

In some areas in Africa 25 - 30% of pregnant women attending antenatal clinics are HIV positive. One in three of their babies will be born with the virus. Most of these children will develop AIDS and die before the age 5 years. So far approximately one million children have been infected and half a million have already died, almost all of them in Africa [2]. In Ghana seroprevalence of HIV in antenatal attendees was between 2 - 3% nationwide in 1994. The figures however ranged between 1% and 9.4% [3].

There are several consequences resulting from STDs. These may be health related, social or economic. Economic consequences of STDs are made up of direct and indirect costs. Indirect costs include productivity losses resulting from sick leave, disabilities or premature death. Health related consequences are infertility, fetal wastage, neonatal death and blindness in children among others. Social consequences include ostracization, loss of self esteem and loss of respect.

Effective management is thus very essential in preventing sequelae in the long term. Effective management involves not only drug treatment but a whole package of patient education

and counseling on risk reduction, partner management, drug compliance, condom promotion and follow up.

a. **BACKGROUND**

Estimates of STD prevalence in Ghana have not been easy to determine because data from hospitals and clinics are inadequate. The communicable diseases reporting form (CDI form) specifies only gonorrhoea separately and lumps all other STD's into a category of "other communicable diseases".

Institutional based data from Asuogyaman District indicates that pregnancy and related complications of which ectopic pregnancies accounted for 91 cases (9%) was the seventh (7th) highest cause of morbidity in the district. Gynaecological disorders ranked tenth on the morbidity ladder. 40% of these gynaecological disorders were due to pelvic inflammatory disease. AIDS was the number five cause of mortality in the district according to VRA hospital annual report [4]. The records however did not show STD's as being a significant reason for OPD attendance. Delay in seeking STD treatment or non treatment has significant impact on its spread. Complications of STDs such as PID, Ectopics etc. are seen in the district without evidence of acute infections. It may appear that the acute cases are being seen by other health care providers outside the allopathic health care delivery system. It may also appear that these alternative health care providers do not adequately treat the STD's and hence the resultant complications.

1.1 **STATEMENT OF THE PROBLEM**

The treatment seeking behaviour of general populations to ill-health has been researched to a large extent [5]. Before committing increasing resources to STD diagnosis and treatment it is pertinent to study the specific patterns of treatment adopted by people afflicted or those vulnerable and most likely to be afflicted by STDs. However it is observed that limited work has been done on STD treatment seeking behaviour.

In most developing countries including Ghana, there is a significant disparity between what is needed for STD control and what is in place.

Several characteristics of clinics may account for the existing situation and act as deterrents to the usage of the existing facilities. These include long travel distances and waiting time, stigmatization and user fees. Lack of privacy and confidentiality at STD clinics have also been cited as deterrents to the use of such clinics [6]. Judgmental and unsympathetic attitude of providers has also been found to have a profound impact on patients' opinion of services [7]. There is increasing evidence that a large proportion and in most settings, most STD patients seek care elsewhere such as from traditional healers, pharmacists, friends or in the market place [8].

Age and sex may have discriminatory function in the choice between traditional and allopathic health care. The elderly tend to use traditional healers more than the young [5]. Other factors may include educational status, family and social characteristics, aetiological concept of disease and "treatability" of disease.

1.2 **HYPOTHESIS**

Treatment seeking behaviour in STDS is both a function of knowledge of and attitudes towards the disease and sex and the issues of accessibility and quality of health care facilities that deal with STD's.

OBJECTIVES

General Objective

The general objective of this study was:-

- * To identify the factors that determine the treatment seeking behaviour of adolescent students in Asuogyaman District

Specific Objectives

Specifically, the study attempted:

- * To describe students' perception of STD's eg. causes, effects etc.
- * To identify the various treatment options available to students when they do contract or if they contract STDS.
- * To identify the various avenues that adolescent students use for STD care.
- * To describe reasons for their treatment choice among these options.
- * To describe respondents assessment of appropriateness or otherwise of treatment offered by these alternative providers.

OPERATIONAL DEFINITIONS

- * STD ~ Sexually Transmitted Diseases
- * In Males ~ Urethral discharge in a sexually active male
Genital ulcer not due to trauma.
- * In Females ~ Vaginal discharge associated with offensive odour, lower abdominal pain and of any color other than white.
- * Adolescent ~ Students aged 15 - 20 completed years.
- * Student ~ Any male or female attending senior secondary school.

RESEARCH METHODOLOGY

TYPE OF STUDY: A descriptive cross sectional study was carried out.

VARIABLES:

DEPENDENT VARIABLE: “STD treatment seeking behaviour” was the dependent variable to be looked at.

INDEPENDENT VARIABLES:

The independent variables that were considered included the following:-

- * Knowledge about STD's e.g. transmission, complication.
- * Source of STD treatment/care
- * Aspects of the care-seeking behaviour.
- * Accessibility, acceptability, affordability of treatment at selected source.
- * Assessment of service provided.

between 15 and 22 years; about 20% aged 18 years or more. Purposive sampling of students who have contracted STDs in the past was used. A total of 62 students completed the questionnaire from the three schools selected randomly. In order to attract as many students who had had STDs in the past but who were shy, an initial interaction with all students to assure them of non-intimidation took place. A young teacher in each school started with the completion of questionnaire after which others followed. Free drugs for gonorrhoea were promised those who would own up and this greatly facilitated the willingness of the students to respond to the questionnaire.

LIMITATIONS

- i. Time:- I had very limited time at my disposal (i.e. between 28 April and 16 May) to complete the data collection because of the nature of the school terms.

To overcome time limitation, 50% of the schools were selected at random and students who had contracted STDs in the past selected.

- ii. In spite of the interaction some students who had had STDs may still not have participated.

DATA PROCESSING AND ANALYSIS

This was done by EPI-INFO version 6.

- * Knowledge of other sources of STD management.
- * Consequence of improper management of previous STD episodes?

STUDY AREA AND STUDY POPULATION

The study area is a district created in 1988. The famous Akosombo dam is in the district which has a population of about 78,000. The three schools whose students were used were Apeguso Secondary School, Akwamuman Secondary School and Akosombo International School.

DATA COLLECTION TECHNIQUE

a. QUESTIONNAIRE ADMINISTRATION

A self administered questionnaire was used. To achieve maximum participation and recovery of completed questionnaire, the questionnaire was administered to the respondents as a group at a time convenient to them in their respective schools.

Researcher was available to explain various questions which were not clear to respondents.

Prior permission was sought in writing from the GES district office and also from the heads of the respective schools with whom suitable times for data collection were arranged. Data were collected between 7th and 16th May 1997. Pretesting of questionnaire was done at Koforidua Secondary Technical School on 24 April 1997.

b. SAMPLING

There are 1207 students in 6 senior secondary schools within the district. The ages range

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Control of the spread of STDs and AIDS continues to attract increasing interest worldwide [9]. Substantial resources have been expended and continue to be expended on the control of STD/AIDS.

This review discusses the burden of STDs, relationship between STDs and HIV, complications, socio-economic impact and the control of STDs. Treatment seeking behaviour in general was reviewed. Most of the review centered on the developing world since this is most relevant to the purposes of Ghana.

2.2 SEXUALLY TRANSMITTED DISEASES

2.2.1 BURDEN OF STDs

Sexually transmitted diseases represent a group of communicable diseases that are transmitted predominantly by sexual contact [10, 11]. They are among the most common group of notifiable diseases in most countries [12]. In 1993 the World Bank ranked STDs the second most important diseases worldwide, for which intervention was possible amongst women aged 15 and 44 years [13]. The diseases have probably been around since antiquity, however it did not attract much attention in the developing countries until the advent of

HIV/AIDS in the early 1980s.

More than twenty pathogens have been found to be spread by sexual contact (table 1). Some of these agents such as chlamydia trachomatis, human herpes viruses 1 and 2, human papilloma virus, hepatitis B virus and the human immunodeficiency virus are replacing the classical bacteria diseases (syphilis, gonorrhoea and chancroid) in the industrialized countries both in frequency and importance. In developing societies both viral and bacterial STDs constitute major public health problems [12].

The most important sexually transmitted pathogens are shown in table 1.

TABLE 1

AGENT	DISEASE
<u>BACTERIA</u>	
Neisseria gonorrhoea	Gonorrhoea - urethritis, pharyngitis proctitis, cervicitis, ophthalmia neonatorum L.G.V.
Chlamydia trachomatis	Non gonococcal urethritis
Mycoplasma hominis Ureaplasma urealyticum	Non gonococcal urethritis
Treponema pallidum	Syphilis
Hemophilus ducreyi	Chanroid
Calymatobacterium granulomatis	Granuloma Inguinale
Shigella Species (in homosexuals) Group B Streptococcus (vaginal transmission to neonates)	Neonatal sepsis
<u>VIRUSES</u>	
Herpes Simplex Viruses 1 and 2	Genital Herpes
Hepatitis B virus	Viral Hepatitis
Cytomegalovirus	Neonatal sepsis (congenital abnormalities in neonates)
Human Papilloma Virus	Genital Warts
Molluscum Contagiosum	Molluscum Contagiosum
Human immunodeficiency virus (HIV)	AIDS
<u>PARASITE</u>	
Trichomonas vaginalis	Trichomoniasis
<u>FUNGUS</u>	
Candida albicans	Candidiasis
<u>ECTOPARISITES</u>	
Phthirus pubis	Pubic lice
Sarcoptes scabiei	Scabies

Source: WHO Scientific Group on STD November 1981.

The magnitude of the STD problem has been commented upon and described by several authors who invariably agree that STDs constitute major public health problem and are on the increase [9, 13]. Estimates of annual cases of curable STD worldwide by WHO shows the following:-

DISEASE	NEW CASES/YEAR (MILLIONS)
Gonorrhoea	52 ~ 122
Chlamydia Infection	29 ~ 72
Syphilis	10 ~ 24
Chancroid	5 ~ 7
Trichomoniasis	57 ~ 102

The increasing incidence occurs both in developed and developing countries but to different extents. WHO (1988) estimates that total new cases per year in North America and Western Europe will be 3 ~ 5 million and 2 ~ 3 million respectively. In South and East Asia the estimated new cases is between 79 ~ 143 million while the estimate for Sub-Saharan Africa is 30 ~ 94 million [12].

Estimates of gonorrhoea incidence in developed countries has shown a decrease. Since the late seventies, estimates for Africa suggests, incidence rates of 3,000 ~ 10,000 cases per 100,000 inhabitants. Chlamydia trachomatis infections has however assumed

increased importance since the 1980s, 4 ~ 6 million infections per year are reported in the USA [12]. Figures from developing countries are unreliable due to diagnostic problems and poor surveillance systems [9]. In Ghana the absolute numbers of gonorrhoea cases does not show any trend. The range between 1986 and 1993 was 13,668 to 15,858 in [14].

Syphilis and chancroid also show increasing figures in the developing countries where diseases are endemic. 5 - 20% of antenatal clinic (ANC) attendees and up to 70% of prostitutes may be seropositive for syphilis.

Seropositivity among ANC attendees in Mbeya (Tanzania) was 15% [5]. In 1994, syphilis seropositivity in northern Ghana ranged between 8 - 18% (mean 14.1%) [16].

Cumulative HIV infections were estimated at about 27.9 million as at July 1996. Cumulative AIDS cases up to July 1996 was estimated at 7.7 million while cumulative AIDS deaths was estimated at 5.8 million within the same time period [17]. In Ghana a cumulative total of 20,859 had been reported as at December 1996 [18].

Identifiable reasons for the continuing unacceptable rates in spite of the existence of some STD services in most developing countries are discussed below:-

- * Low priority in allocating resources has been accorded STD by policy makers and planners for reasons which include an association of STD with perceived discreditable behaviour, failure to associate the diseases with the complications

and sequelae; and the failure to recognise the magnitude of the problem [13].

- * The lack of treatment facilities, trained personnel and effective drugs have been blamed as contributing factors for the increased incidence of STD's in developing countries. Service delivery has often been through specialized STD treatment facilities which provide inadequate coverage and are stigmatizing particularly for women [13]. Control efforts have been concentrated on symptomatic patients (usually men) and failed to identify asymptomatic individuals (commonly women) until complications are manifested. Ignorance about STD symptomatology, prevention and available treatment services and the reluctance of people to seek treatment with trained medical personnel are also identified as factors contributing to high STD incidence [19,20].
- * Treatment strategies have focused on unrealistic requirements for definitive diagnosis. Ineffective low cost antibiotics continue to be used for reasons of economy.
- * Urbanisation usually associated with separation of young people looking for work and a more exciting life away from their parents and community of origin is accompanied by acquisition of new and "risky" sexual behaviour. It is as a result of this that STD's have been reported to be three times more frequent in urban than in rural areas [21]. In Mbeya (Tanzania) studies done on HIV/AIDS prevalence have identified a higher proportion of urban groups (pregnant

women and blood donors) with HIV seropositivity.

- * Migration which usually takes people into urban areas with its associated economic hardships and social disruptions such as wars tend to create conditions that foster acquisition of new and irregular sexual partners and tend to increase susceptibility to STDs [22, 9]. In a review 10 - 15% of STDs were reported to have been acquired outside the country of usual residence [21].
- * Increased interaction with western cultures has introduced new behavioural patterns including permissive attitude to sex. Sexual practices such as homosexuality has been blamed for increases in STD in developing countries. The youth in particular are more receptive to these “new” values introduced from other countries and cultures [21, 23].
- * High bride price in some communities tends to postpone marriages. This paves the way for premarital sex and increases the risk of STD acquisition especially coupled with low use of condoms. STDs contracted during premarital and extra marital associations have been known to create a pool for reinfection once it gets introduced into the family unit, especially in polygamous communities [22].
- * Prostitution which is considered a socio-economic necessity in some poor

countries is associated with high incidence/prevalence of STDs. Mulhall quoted high syphilis and HIV prevalence (up to 70%) as well as high gonorrhoea incidence in prostitutes in Ethiopia [11].

It is with the increased rate of infection of STD due to reasons discussed above that the WHO in collaboration with national organisations have intensified efforts at reducing the increasing incidence of STD's.

2.2.2 INTERACTION BETWEEN STDS AND HIV

The second factor that needs to be looked at when dealing with STD is its linkage to HIV. The then head of WHO's STD programme, Dr. Andre Meheus has said, "... we must control STDs to control HIV..."[24]. This statement clearly indicates that there is a correlation between STD and AIDS. Several factors account for this. At least two biologically plausible explanation of why STD's facilitate the transmission of HIV can be advanced.

Biological Plausibility

First STD related inflammatory responses and exudates from lesions increase shedding of HIV in genital fluids rendering HIV positive men and women with an STD more infectious. Secondly STD lesions of the epithelial linings of the genital tract facilitate access of HIV to CD4 receptor cells, rendering HIV negative men and women with an STD more receptive to HIV infection in case they are exposed [25].

Epidemiological Evidence

The most convincing epidemiological evidence to date has come from longitudinal

studies that examined seroconversion rates among people with “comparable” sexual exposure and different incidence rates of STDs. These studies indicate that the risk of acquisition of HIV in the presence of ulcerative or non-ulcerative STD is increased by a factor of two to six [26]. Further analysis from a cohort in Kinshasa, Zaire, showed that a combined intervention of STD control and condom promotion among female prostitutes led to a dramatic decrease in the incidence of HIV infection [25].

Grosskurth, H; Mosha F et al in 1995 showed that improved STD treatment reduced HIV incidence by about 40% in a rural population (Mwanza) in Tanzania [27].

Impact of HIV Infection on STDs

Studies in Abidjan and Rwanda have shown prevalence of genital ulcer disease as strongly associated with HIV infection and it was clearly found that there was a relationship between the presence of genital ulcer disease and declining immunity to HIV infection [28].

The potential effects of HIV infection on the natural history of syphilis is particularly worrying. Earlier case reports suggested that in HIV infected patients the clinical presentation of syphilis may be atypical, progressing to neurosyphilis more frequently. Serological tests may be either false positive or false negative and standard therapy for early infection inadequate [29].

2.2.3 STD COMPLICATIONS

With the deficiencies in the STD control programmes of most developing countries the full range of the natural history of STDs are encountered [8]. This implies that there are those who are aware of STDs and present early for treatment; there are others who are unaware that they had STD's either because they were asymptomatic or were ignorant of symptoms. This latter group may be picked up while being assessed for other diseases or during targeted screening such as in pregnant women or prostitutes. There are yet others who present to allopathic health care facilities after they have tried other treatment options and have not successfully treated their infections. Others may present the first time with complications of STD [8].

Complications of the common STD's (gonorrhoea, chlamydia, syphilis) include pelvic inflammatory diseases (PID), female infertility and adverse pregnancy outcomes such as congenital abnormalities or fetal wastage and ectopic gestation.

Among males complications may include, urethral stricture and male infertility. Children may suffer from ophthalmia neonatorum or neonatal sepsis.

The annual incidence of PID in Sub-Saharan Africa may be as high as 1 - 3% among women 15 - 44 years with an annual mortality of 0.1 - 1.5 per 1000 [30]. In the United States of America approximately 1 million women suffer from PID. Up to 30% of infertility in parts of Africa are considered to be due to STD and up to 50% of women may be infertile, 80% of which is attributable to STD [23].

Rosenbert et al [31] made an alarming estimate that up to 50 times as much ophthalmia neonatorum is caused by gonococcus and chlamydia in Africa than in industrialised countries. Prematurity, low birth weight and perinatal deaths are also associated with STD. In Zambia 42% of stillbirth have been attributed to syphilis and congenital syphilis has been implicated in 30% of all perinatal deaths [32].

Recent evidence has associated human papilloma virus especially types 16 and 18 strongly with cervical cancer, the most common neoplasm among women in many developing countries [23, 33]. The International Agency for Research on cancer, which coordinates and conducts epidemiological and laboratory research aimed at developing strategies for cancer prevention in 1995 published conclusive evidence of the role of human papilloma virus as a cause of cervical cancer [1].

2.2.4 SOCIO-ECONOMIC IMPACT OF STDs

STDs and their complications tend to have severe consequences on the socio-demographic and economic status of countries and whole sub-regions. There is limited work done on impact of STDs per se but much work has been done on the impact of AIDS. As a result most of the observations would be drawn from the impact of AIDS.

There are painful social consequences of untreated STDs suffered primarily by women in the developing world. For many, social stigma and personal damage due to infertility and

pregnancy wastage result in divorce or commercial sex work. In Tanzania, a husband can return an infertile woman to her parents. In addition, the husband may request the return of her bride price [8]. The complex interaction of infertility and other social factors in African society is depicted as follows:-

- * "Marital instability caused by infertility and the spread of venereal disease caused by marital instability and sexual mobility can form a vicious cycle. The movement of abandoned or rejected barren women to urban prostitution has been noted in Niger, Uganda and the Central African Republic. Similarly, in many of these societies, marital and sexual mobility on the part of the women is interpreted as a desperate attempt to become pregnant, and tolerance on the part of society as a means to maximise their chances of doing so... once venereal disease was introduced into a community with some degree of sexual or marital mobility, its diffusion might have been assured by existing customs. Subsequently, the mobility itself may have been intensified to overcome the fertility effects [4].

Socially STDS/AIDS are bound to stretch coping mechanisms of the individuals affected, their families and the communities as a whole. Infertility following PIDS and STDs creates great emotional loss of identity of the married couple and extended family in most places in Africa" [33, 35, 36].

Social Stigma

STDs have for a long time been regarded as shameful diseases associated with considerable stigma and loose morals. In the 15th century, prostitutes in Scotland with STDs were branded on the chest with a hot iron and driven from town and as recently as the late 19th century in the US, prostitutes found infected were detained in a Social Evil Hospital [37, 38]. In present day developing countries, STDs are considered to be just retribution for immorality by health workers, politicians and the general population. The extent of social stigma associated with STD may deter people from seeking appropriate treatment and women have been identified to be more vulnerable [9].

Health Services

The increasing trend of STDs and the sequelae they generate tend to put an extra burden on the health sector, especially in developing countries. 20 - 40% of all acute admissions to gynaecological wards in some African hospitals are due to P.I.D. most of which are caused by STDs [8].

For instance treatment of four million new cases of chlamydia annually in the US is estimated to cost at least US\$2.2 billion [39]. In Tanzania it is estimated that the cost of treating an adult AIDS patient will be US\$290 and \$195 for paediatric cases [40].

Economic Consequences

Studies documenting the economic consequences of STDs are limited. The costs of pelvic inflammatory disease in US have been estimated to reach 3.5 billion dollars. It also has been estimated that 5 percent of the total discounted healthy life years lost in Sub Saharan Africa is due to STDs excluding HIV. HIV alone accounts for 10% of healthy life years lost [41].

Information about the costs of diagnosing and treating STDs in the developing world is scarce. It is known that the cost of using the most sophisticated diagnostic techniques exceed the per capita national health-care budgets in many low income developing countries. It may be useful to use alternative strategies for reaching populations in high prevalence areas syndromic management or presumptive therapy may be more cost effective [8].

A world bank report notes that the sum of the days of productivity lost due to HIV, syphilis and chlamydia infections almost equals the number of days lost due to malaria and measles. Making treatment for curable STDs available represents one of the most cost effective ways to improve health in the world [41].

2.3 STD HIGH RISK GROUPS

High risk groups defined by geographic, socio demographic and behavioural characteristics for STDs have been identified in both developing and developed countries. They include commercial sex workers (CSW) and their clients, members of the military and other uniformed forces, long distance drivers, homosexual men, adolescents and itinerant

workers. Their sexual behaviour often tends to have changed because of poverty, loneliness and alienation. Members of these groups have a relatively high rate of sexual partner change.

A study of HIV prevalence among 68 East African long distance truck drivers found 40% of the drivers and 26% of their assistants to be HIV positive. 37% of the drivers and their assistants admitted to more than 50 lifetime sexual partners, both parameters were far in excess of the general population [42].

A report from African Medical and Research Foundation AMREF (Tanzania 1993) notes that transport workers and their partners have high numbers of sexual partners and practice unsafe sex [43]. The high mobility of the transport worker is also thought to facilitate the spread of STD/HIV infection to other populations.

Factors responsible for this include reduced social restraint and altered/risky sexual behaviour. Long separation from family and partners, peer pressure and general sense of non-vulnerability to STDs may be responsible for this social phenomenon. Mann, however has identified young people as the largest STD high risk group [44, 9]. In general, adolescents have limited information and skills for making responsible sexual decisions. Female adolescents are biologically more susceptible to some STDs because of an increased zone of ectopy and because of other genital tract characteristics due to hormonal changes of puberty [45].

The AMREF (Tanzania 1993) study also revealed that high risk women or CSW do not use modern health care for fear of social stigma, and they had a high STD prevalence, 31% T. vaginalis, 7% gonorrhoea, 12% C. trachomatis, 26% active syphilis and 49.5% HIV seropositivity [43]. Shao et al (1987) in screening public house workers in Tanzania identified an STD prevalence of 33.3%, none of whom had sought treatment [46]. In contrast however, Msamango and Pallangyo (1987) in their study in Tanzania found that of those voluntarily reporting for STD treatment, 3.5% claimed to be barmaids [19].

N'galy and others however assert that in Africa there is no clearly defined STD high risk group and thus do not agree with the high risk concept proven elsewhere being applied in the African context. They identify the urban areas as high transmission areas and all sexually active adults as being at risk [47]. This generalisation neglects observations by other authors including Ankrah (1989) who states that the socio-cultural environment of the individual or groups studied need to be considered [35]. Since Africa is not socio-culturally homogenous one expects variations in social behaviour between countries and among people within the same country. The concept of "high risk groups" is therefore likely to be applicable in places where the socio-cultural environment creates identifiable groups who have a greater risk of acquiring STDs than the general population on account of their risky sexual behaviour. Thus labelling such groups as "high risk" may be stigmatising, the concept is intended to be epidemiological rather than moral or social.

The concept of high risk groups is based on a notion that some segments of the

population are more likely than others to transmit infections sexually. James Yorke and Herbert Hethcote (1978) used a mathematical framework to develop the "high risk groups" concept which was proven in the US with gonorrhoea. The theory is presently applied to STDS including HIV. They postulated that relatively small groups of people - "high risk" groups were responsible for the maintenance of gonorrhoea endemicity [48]. The public health importance of high risk groups concept rests in their potential to permit targeting of limited resources to groups that are most critical for STD transmission. Recent studies suggest that focused case findings and partner notification may diminish the endemicity of gonorrhoea [9, 11, 40].

2.3.1 ADOLESCENTS AND SEXUALLY TRANSMITTED DISEASES

Adolescence is the period of psychosocial development beginning in the preteen years, usually in conjunction with onset of puberty and extending until the individual assumes an adult role. Early adolescents (10 - 15 years) have rapid wide mood swings, and alternate between extreme co-operation and extreme resistance to adult guidance. They have a strong sense of "invulnerability" They sincerely believe that adverse events will not happen to them or will be easily resolved. Early adolescents believe that "the whole world is watching or listening to them" at all times - the concept of "imaginary audience"

Sexually, as pubertal events occur, early adolescents may (re)discover masturbation and

other pleasurable self-stimulation. They form close friendships with peers and may experiment sexually with them, usually to satisfy curiosity. Early adolescents begin separating from parents by shifting their ties to other adults and often developing “crushes” on teachers, coaches and other national figures in sports. There is much sexual content and innuendo in jokes, songs and conversations away from adults.

18 percent of boys and 6 percent of girls claim to have had their first sexual intercourse by 14 years. By age 17 years approximately half of all adolescents have experienced sexual intercourse, some before puberty but many between age 15 and 16 years [49]. A study conducted by the Eastern Regional Health Administration in 1991, looking at sexuality among second cycle students in the Kwahu Ridge indicated that 12 percent of respondents had had their first sexual intercourse by the age 13 years.

Middle adolescents continue to feel invulnerable but now have increased mobility and independence and less adult presence and protection. Risk taking behaviour involving substance abuse and/or sexual activity may have harmful consequences. All these physiological changes in adolescents make them more vulnerable to acquisition of STDs.

Puberty and adolescence contribute to the incidence and clinical features of STDs in the youth [50]. During puberty, genital maturation increases the capacity for intercourse. In females estrogenization decreases susceptibility of the vulva to most infections, alters vaginal flora and pH and facilitates growth of trichomonas if acquired. The exposed columnar

epithelium found on the vaginal part of the cervix is more prone to infection with gonorrhoea and chlamydia if there is contact with an infected partner.

Denying possibility of harm, early and middle adolescents are less likely than others to use preventive methods when engaging in sexual intimacy and more likely to deny symptoms of infection. Excessive attention to genital hygiene such as frequent douching or excessive neglect of perineal hygiene may complicate the clinical appearance of any infection.

Adolescents who do suspect an infection may be embarrassed or frightened and delay seeking treatment for days to weeks. Once diagnosed they may fail to inform partners because of anger or shame and may fail to complete treatment especially if symptoms diminish. Adolescents who have a series of short lived relationships each of which involves intercourse increase their risk of exposure to infection and complicate the task of contact treatment.

Adolescent contraceptive practices affect their risk of sexually transmitted infections [51]. Most adolescents never use a method or rely on the oral contraceptive. The pill, reduces the impetus to use the barrier method or to involve males in prevention. Adolescents who decide to use barrier methods either use them incorrectly or do not use them consistently [45].

STD control in adolescents as in other age groups may be frustrating because of the high frequency of asymptomatic states and the presence of antibiotic resistant strains.

Adolescents may practice partial treatment with self prescribed antibiotics obtained from friends. Yet another problem with STD control in adolescents is the limited accessibility of services, costs and staff attitude, the latter rebuking them when they do report for treatment.

Adolescents have, unique reproductive health needs. They need access to convenient, user friendly, confidential, low cost STD care and contraceptive services. In general adolescents have limited information and skills for making responsible sexual decisions [45].

2.4 **STD CONTROL STRATEGIES**

The mainstay of an STD control programme is the provision of adequate diagnostic and treatment facilities for prompt diagnosis and appropriate and effective treatment of STDs [9, 10]. Other strategies include active case finding and screening, health education, safer sex and condom promotion, legislation and operational research.

It is however important to recognise that many aspects of STD control model of specialised treatment and referral centres developed in industrialised countries may not be appropriate, feasible or transferable to many resource poor settings such as occur in Africa. In these settings STD patients particularly males commonly seek STD treatment outside the formal sector, or seek treatment from primary health care workers who have received little or no specific training in STD management. Again STD control in these settings, must compete for resources with other important and less stigmatised health problems. Although funding for STD control has increased as a result of HIV/AIDS control programmes resources are still inadequate and health infrastructure remain weak [8]. There is the need therefore to explore

innovative approaches to STD control.

a. **STD Diagnosis and Treatment**

Adler (1995) [10] and others advocate establishment of specialised units, for diagnosis and treatment while others [40, 52] have advocated for integration of STD care into primary health care because of the stigma associated with seeking care for STDs. In the UK, STD units used to be located in basements and dark alleyways of general hospitals. They are now commonly referred to as genito urinary departments [10]. The documented existence of such specialised STD units in developing countries is scant and the diagnostic facilities in developing countries are also inadequate [22]. Where STD services exist, clinics are largely urban and are accessible to only 10-20% of the population. In Ghana specialised STD services exist only in the regional hospitals and in Adabraka Polyclinic in Accra. In developing countries the treatment of STDs by modern health facilities and trained medical personnel has been observed to be low. STD sufferers tend to resort to inappropriate self medication, treatment from traditional healers and untrained allopathic medical quacks on account of social stigma, cultural beliefs on STD causation and the association of STDs with juju or bewitchment, cost in seeking care etc [19, 20]. The traditional practitioners can be classified into herbalists and diviners. The former relies on the use of concoctions and decoctions from plants and animal products while the latter uses herbs, divination and traditional religious practices. Untrained

allopathic medical quacks are usually itinerant allopathic druggists and injectionists who operate mainly in rural areas [20].

b. **Contact Tracing**

This involves the STD patient (index patient) notifying sexual partner(s) of the need to seek treatment. It aims at reducing the pool of symptomatic and asymptomatic infected persons and the rate of re-infection. Facility-oriented contact tracing makes use of health personnel contacting partner(s) identified by the index patients. The commoner option, client-oriented contact tracing involves the index patient informs his/her sexual partner(s) to seek investigation and treatment. If time is not spent explaining the importance of partner notification to index patients compliance may be poor [38]. As an important component of STD control it will be expedient to train health personnel to counsel index patients on partner notification.

c. **Case Finding**

This may involve mass screening of groups of people. It is reported to be cost effective in populations with high STD prevalence such as prostitutes, bar girls, migrant workers and readily accessible groups such as blood donors and women attending ante-natal and family planning clinics. Screening of pregnant women and treating those infected is recognised to be one of the most effective ways of eliminating congenital syphilis and ophthalmia neonatorum. By instituting clinic based screening, antenatal clinics in Kenya were able to dramatically increase the number of women who were screened for syphilis with a rapid plasma reagin

(RPR) and treated [53]. Since cost may limit screening, risk assessment based on behavioral characteristics in women prior to screening, may be more cost effective. A region in the United States successfully used risk assessment on asymptomatic women to identify those who would undergo a diagnostic test for chlamydia [54].

d. **Health Education**

This serves to regulate the sexual behaviour and to promote the use of condoms in the promotion of safe sex [55]. Prevention messages include:-

- * Encouraging individuals to use latex condoms consistently and correctly everytime they have sex.
- * Encourage individuals to practice other safer sexual behaviour eg. forms of non penetrative sex.
- * Encourage individuals to abstain from or delay sexual intercourse.
- * Encourage people to reduce their number of sexual partners.

Other health education messages should focus on increasing awareness the general population on STDS and advising on early, appropriate treatment and full compliance. Partner notification and management and reinforcement of prevention behaviours is also important.

2.5 **STD TREATMENT SEEKING BEHAVIOUR**

b. **Family and Social Characteristics**

Extended families tend to behave more traditionally than nuclear families. Household heads and people with elevated society or household status are important in the treatment seeking behaviour of the whole family [59]. Igun (1987) and others have identified an important influence of lay referrals

“Africans tend to seek medical care in a context of a network of kin, friends, neighbours who help to diagnose, select sources of treatment and monitor the process of treatment and even influence changes in the course of treatment [55]”

c. **Educational Status**

Formal education is one of the severest exposures to "Western Cultures" and tends to influence the choice of health care between modern and traditional medicine. Formal education turned villagers away from traditional medicine in Tunisia [60] and Iran [61]. Twumasi also recorded some influence of formal education in urban Nigeria with regards to choice of modern and traditional medicine [62]. In rural Nigeria, however, Ademuwagun observed that education, did not have any influence on the pattern of health care utilisation [63].

d. **Socio-Economic Status/Occupation**

Igun (1987) proposes the relative wealth hypothesis [55] which suggests that the different wealth of identifiable groups within a population can be an explanation for their differential utilisation of health care options. Cost is widely recognised as a determinant of care use and is known to be relevant in the African context [64].

Disease Features

a. Aetiological concept and type of disease

A significant relationship between the perceived cause and type of disease and the type of health care sought is acknowledged [65, 66]. In Latin America supernatural or personalistic disease is treated by traditional healers and diseases thought to have an infective or "organic" origin are treated at home or by the doctor. Similar patterns have been observed in Bangladesh and in Africa [65]. A combination of modern and traditional treatment options or simultaneous use of both options is also common in developing countries. In some communities people go to doctors for relief of symptoms and then go to folk healers to remove the cause of the disease [67]. In rural Tanzania some people with folk diseases consult traditional healers, others however who believed that diseases were caused by supernatural agents used modern health services frequently [68]. Current cultural changes seem to be reducing the number of illnesses felt to be prone to traditional medicine [69].

b. Disease Severity

The severity of disease in most third world communities plays an important role in influencing where people seek treatment. Colson in Igun's review postulated that for a severe disease people may try every resource at their disposal, but this obviously does not explain the simultaneous use of the sources of treatment [55]. He also hypothesises that chronic and non

incapacitating diseases would call for traditional medical care [55]. This however may be an over generalisation as diseases are perceived by different groups in varying ways.

c. **Efficacy of Treatment ("Treatability" of Disease)**

The “treatability” of a disease has been identified by researchers working in Africa as being important in determining the treatment seeking behaviour of people [55, 62]. This concept states that people tend to choose the form of treatment on the basis of previous experiences and observations, that they believe will provide effective cure or relief.

2.5.3 **Enabling Factors**

a. **Geographical Accessibility**

Proximity to health care plays an important part in whether people utilise it or otherwise. In rural Tanzania, Ethiopia and the Ivory Coast the accessibility of modern services was one of the major determinants in the non-use of traditional healers. On the contrary the use of traditional healers was not found to be related to accessibility in rural Ecuador [5]. The distance factor has not been exhaustively studied on account of the composite factors of social distance, cost distance, peoples perception of distance and opening hours of service. In Tanzania types of STD services for sex workers were compared, brothel based periodic visits, clinic visits outside normal hours, regular clinic attendance at upgraded clinics, and regular clinic attendance at clinics without intervention. The sex workers preferred brothel based STD services because of geographical proximity, convenience and confidentiality [70].

b. **Accessibility (Social Distance)**

The communities' comfort and acceptance in using services is important and has been cited as a possible reason for the preference for traditional medicine apart from physical proximity [71]. In Tanzania, Mali and Cote d'Ivoire where brothel based STD services were piloted, the sex workers preferred these services because it was available at times convenient to them and were private and confidential [8]. A conceptual and emotional congruence between traditional healers and their patients has been cited [5]. Work in India reported by Djurfield and Lindberg in Kroeger's review and other places has not shown any differences in satisfaction and dissatisfaction between traditional healers and their patients and patients of allopathic healers [5]. Gebre however reported that in Ethiopia community members reported a preference for traditional healers who are perceived as sympathetic and caring [72].

Sajiwandi and Baboo [37] recorded that the stigmatising nature of STDs deters people who are infected from seeking treatment in hospitals and instead are seen by traditional healers.

c. **Cost**

The high cost of care is usually linked with modern medicine, traditional medicine is often regarded as cheap and within reach of the poor [5]. On the contrary a relatively high cost of traditional medicine has been reported in rural Tanzania, Kenya and other places. This

might have been because modern medical care mainly offered by the government health system is relatively accessible (good geographic coverage) and free. Payment in kind is a method traditional healers may prefer in some places [5].

The increase in fees or the introduction of fees for health care is reported to be followed by a decline in attendances in Ghana and Swaziland [64, 73]. Similarly in 1989 and 1992 in Kenya and Zimbabwe respectively the introduction of user fees resulted in dramatic decline in clinic use [74]. The decline is believed to affect the poorer segment of the community and also tends to deter people with problems like STD's from seeking medical care. Unofficial charges by health personnel in facilities offering fees for service or free services may also have a similar effect [75]. A long waiting time usually viewed against the financial cost of not being productively involved in work may also deter patients from seeking treatment. Commercial sex workers who are mainly involved in risky sexual behaviour on account of economic hardships are therefore likely to avoid seeking treatment because of direct and indirect costs [8].

d. **Quality of Care**

Improved levels of utilisation seem to depend on improved quality of care [76]. This is a multifaceted issue and may involve physical features of the facility (big buildings) cleanliness, comfort, sophisticated laboratory, drug availability, convenience of opening hours, providers' attitude and level of professional qualification [60].

In rural Ethiopia, people bypassed the referral system to better equipped hospital for basic health care in spite of long distances [77]. In rural Guatemala the utilisation of health posts was low due to quality of care [76]. The non availability of drugs has been known to affect the choice of treatment in Ghana and elsewhere [64, 73]. This is further supported by a recent study in Cameroon which showed increased utilisation of health services when quality of care was improved (steady availability of drugs) even in the face of introduction of charges [78]. What is perceived as good quality of care depends on a large extent on the value the consumer places on a particular component of health care and his knowledge and experiences with the service or providers.

e. **Attitude of Staff**

The health staffs' attitude towards patients and their relatives may also affect the treatment seeking behaviour of the community. The traditional healer in his approach communicates with the patients and/or his relations, uses familiar language and concepts and is found to be supportive and provides personalised care [79]. Judgemental and unsympathetic attitude of providers have also been found to have a profound impact on patients' opinion of services. In Ethiopia informants in a study of STDs in a community stated that "providers should not scold" [72]. An uncaring, abusive, inconsiderate and unfriendly attitude and impersonal approach of modern health workers have also been reported [75]. Preferential

treatment of the higher socio-economic segment of the community basically keeps the lower socio-economic segment of the community further away from modern health care [80].

CONCLUSION

From the foregoing it becomes clear that several factors account for the increase prevalence of STD. If STDs remain untreated the burden on individuals and communities can be devastating with women and children bearing the bigger brunt.

STD control relies considerably on the individual presenting him/herself for diagnosis and treatment. Change in sexual behaviour towards practice of safer sex promoted through health education and condom promotion campaigns is also important. Social control is essential in shaping individual behaviour in most developing countries targeting "high risk groups" in control programmes is most cost effective and has been found to be 10 times more effective in averting cases than targeting "non-high risk group" [9, 81].

Individuals treatment seeking behaviour is known to be affected by a variety of factors, socio-demographic factors of the individuals and community, their perception of the nature of disease and features of treatment services, available to them. It is important to understand the factors influencing the STD treatment seeking behaviour of individuals in setting up STD control programmes acceptable to and utilised by the general population and high risk groups in particular. Knowledge about STDs eg. Its transmission, complications and available preventive measures as well as sources of treatment of STD and reason for choice of treatment have all been found to affect treatment seeking behaviour.

When services are acceptable, accessible and affordable to consumers and they have a high level of confidence in the service providers the consumers are more likely to utilise the services. It is therefore important to determine factors influencing the treatment seeking behaviour of both potential and actual consumers of STD service.

This review demonstrates that none of the variables mentioned above can be treated on their own but need to be taken in conjunction with others. This study will however be limited to determining factors relating to attitude towards disease and sex accessibility and quality of STD care among adolescents. Adolescents will be the target because of the peculiar physiological changes they undergo during adolescence which makes them more vulnerable. The fact that risk taking among adolescents is high and the limited information on STDs available to them makes them a group to look at. Adolescents again may not have the skills for making responsible sexual decisions and may not have ready access to preventive measures such as condoms. Most if not all adolescents are single and likely to have a more frequent change of sexual partners. Exposure to STD's by virtue of their age will have longer time to lead to long term complications.

All these factors have led to the selection of adolescents for this particular study.

CHAPTER 3

THE STUDY RESULTS AND DISCUSSION

INTRODUCTION

The results and discussion of a study to determine some factors that affected STD treatment seeking behaviour among adolescent students in senior secondary schools in the Asuogyaman district, are presented below. 62 students who had contracted STDs in the past out of a total number of 1207 students in senior secondary schools in the district were the respondents.

3.1 AGE AND SEX DISTRIBUTION

The age and sex distribution in Table 1 and Figure 1 shows that 85.5% of all respondents were aged between 17 and 20 years. This is consistent with the finding by the Allan Guttmacher Institute in 1981 that by 17 years approximately half of all adolescents have experienced sexual intercourse [49].

71% of respondents were males as against 29% females. This trend is probably correlated with the sex ratio of the total student population which is approximately two (2) males to one (1) female.

TABLE 1
AGE AND SEX DISTRIBUTION OF RESPONDENTS

AGE (YEARS)	MALES	FEMALES	TOTAL	PERCENTAGE (%)
15	2	1	3	4.8
16	2	4	6	9.7
17	11	5	16	25.5
18	12	5	17	27.4
19	7	2	9	14.5
20	10	1	11	17.7
Total	44	18	62	100

3.2 PLACE OF RESIDENCE

Rural dwellers out of the respondents accounted for 64.5% as indicated in Table 2. This finding is contrary to what Arya (1988) and Mann (1992) found in their study. A similar study in Mbeya (Tanzania) also showed a high STD prevalence in urban groups [9, 22]. This finding was in spite of the fact that two out of the three sample schools were in urban areas. Probably respondents in the urban schools did not reside in these towns but only attend school there.

TABLE 2**USUAL PLACE OF RESIDENCE OF RESPONDENTS**

	FREQUENCY	PERCENTAGE (%)
Rural	40	64.5
Urban	22	35.5
Total	62	100

3.3 KNOWLEDGE ABOUT STDs

3.3.1 All respondents knew about STDs and could mention at least one STD. It was interesting to note that 40.3% of respondents knew AIDS as an STD. Gonorrhoea and syphilis followed with 33.8% and 22.6% respondents respectively knowing them as STDs. See table 3.

TABLE 3**KNOWLEDGE ABOUT STDs**

NAME OF STD	FREQUENCY	PERCENTAGE (%)
AIDS	25	40.3
Genital Herpes	2	3.2
Gonorrhoea	21	33.8
Syphilis	14	22.6
Total	62	100

3.3.2 MODE OF CONTRACTION OF STDs

All respondents stated that STDs were contracted during sexual intercourse with an

infected partner (table 4). Two persons however stated that in addition STDs were ~~acquired~~ from toilet seats while 1 person stated that one could acquire STDs by sharing underpants of infected persons.

TABLE 4

MODE OF CONTRACTION OF STD

MODE	FREQUENCY	PERCENTAGE (%)
Sex with infected person	59	95.2
From water closet seat	2	3.2
Sharing underpants of infected person	1	1.6
Total	62	100

3.3.3 CONSEQUENCES OF NON/IMPROPER TREATMENT

All respondents stated at least one consequence of non/improper treatment of STDs. 50(80.6%) responded that non/improper treatment could lead to a complication such as infertility with 12 others (19.4%) responding that death could be a consequence of non/improper treatment of STD (table 5). This is a positive attitude that needs reinforcement because it would make people seek treatment to avoid complications.

TABLE 5**CONSEQUENCES OF IMPROPER OR NON TREATMENT OF STDs**

CONSEQUENCE	FREQUENCY	PERCENTAGE (%)
Develop Complication	50	80.6
Death	12	19.4
Total	62	100

3.4 SOURCES OF STD TREATMENT

All respondents agreed that there were multiple sources of STD treatment. However 58 out of 62 respondents (i.e. 93.5%) said they would prefer a hospital/clinic as a source of STD treatment. Two persons said they would prefer a herbalist and 1 person each responded that they would opt for a nurse acquaintance and a shrine respectively as their preferred source of treatment (table 6).

TABLE 6**KNOWN SOURCES OF STD TREATMENT**

PREFERENCE	FREQUENCY	PERCENTAGE
Hospital	58	93.5
Herbalist	2	3.2
Nurse Acquaintance	1	1.6
Shrine	1	1.6
Total	62	100

This finding is in keeping with what Kroeger in 1983 found [5]. He found that the

elderly have been found to use traditional healers in Lusaka (Zambia) and Ibadan (Nigeria), while the young used modern health care facilities. He however found that in rural Nigeria and Ethiopia children used traditional practitioners for treatment of STDs.

In spite of the fact that 93.5% said the hospital/clinic was the best source of treatment only 34% did actually seek treatment there when they were afflicted (table 7). The commonest source from where treatment was sought was the chemical shop i.e. 24 (38.7%). Other sources of treatment were used because of convenience cost anonymity and traditional belief.

Lack of privacy and confidentiality at STD clinics have been cited as a deterrent to their use [6] and this may have accounted for the finding above.

TABLE 7

TREATMENT SOURCE OF RESPONDENTS

SOURCE	FREQUENCY	PERCENTAGE
Self Medication	6	9.7
Clinic/Hospital	21	33.9
Chemical Shop	24	38.7
Herbalist	8	12.9
Others	3	4.8
Total	62	100

* Others ~ Shrine (1) Nurse Acquaintance (1) Friends

Drugs (1)

The utilization pattern may be related to the educational status. Ben Youssef (1974) and Mohseni (1979) found in Tunisia and Iran respectively that formal education turned people away from traditional medicine [60, 61]. Since all respondents had had formal education it is not surprising that only 3 (4.8%) indicated that they would prefer traditional treatment.

Another factor accounting for this observation may be the aetiological concept. 95.2% of respondents said that STDs were caused by sex with an infected person and with that perception will opt for modern/orthodox medical care. Nguma (1986) found out in Bangladesh and in Africa that traditional healers were consulted in diseases that had supernatural or personalistic basis while diseases with “organic” or infective origin were treated by a doctor [65].

3.4.1 **REASONS FOR PREFERRED TREATMENT SOURCE**

Among respondents who said they preferred hospitals as a source of STD treatment (93.5%) all of them gave as a reason the fact that hospitals would offer the best management of their STDs (table 6).

The respondent who opted for the shrine indicated that he had so much confidence in the shrine because the gods are powerful while the two (2) who opted for the herbalist did so mainly because they indicated that treatment costs were relatively lower. The respondent who preferred to go to a nurse acquaintance indicated that this was most convenient for him.

3.5 TIMING IN SEEKING STD TREATMENT

In table 8 dealing with the above issue, 51 respondents representing (82.3%) indicated that STD treatment should be sought immediately. 9 (14.5%) said that treatment should be sought after a few days (within one week) while yet another 2 (3.2%) indicated that STD treatment should be sought after failed self medication. This latter group presume that initial treatment could be provided by the affected individual him/herself. This is consistent with the AIDSCAP/FHI statement that the first point of encounter for STD treatment is the informal sector [8].

TABLE 8
TIMING OF SEEKING STD TREATMENT

TIMING	FREQUENCY	PERCENTAGE
Immediately	51	82.3
After a few days	9	14.5
After failed self medication	2	3.2
Total	62	100

Treatment seeking in STD presupposes that the individual recognizes that he/she has an STD from the symptoms. The high percentage of 82.3% wanting to seek immediate in this study may be related to their educational background.

3.6 ACCESSIBILITY TO STD TREATMENT SOURCE

48 respondents representing 77.4% indicated that they would prefer a service provider near to them (table 9). Geographical accessibility may be subjective but in spite of that studies in Tanzania, Ethiopia and Ivory Coast confirmed that accessibility is an enabling factor to the use of an STD service delivery point [5].

9 respondents (14.5%) even preferred a service provider who would come to their school. This makes it convenient to the STD patient. In Tanzania, Mali and Ivory Coast commercial sex workers preferred brothel based STD services [8].

Gersler in 1979 also found that preference of the community for traditional medicine was as a result of the communities' contact and acceptance of the service [71].

8.1% of respondents preferred service providers who were far away from them. This probably is to ensure anonymity in those who preferred to conceal their identity.

TABLE 9

ACCESSIBILITY TO STD TREATMENT SOURCE

CHOICE	FREQUENCY	PERCENTAGE
Nearby service provider	48	77.4
Service provider far away from you	5	8.1
Service provider coming to your school	9	14.5
Total	62	100

3.7 AFFORDABILITY OF STD SERVICE

On the issue of affordability of STD services, only 6 respondents (9.7%) indicated that they would patronize an STD treatment service that charged high fees. 43.5% and 46.8% respondents respectively indicated treatment sources that either charged moderate fees or offered free service (table 10). Studies in Ghana and Swaziland [64,73] and also in Kenya and Zimbabwe [74] reported decline in clinic attendance with introduction of or increases in user fees.

Respondents who indicated that they would patronize STD services charging higher fees associated the higher fees with better service quality.

TABLE 10

CHOICE OF AFFORDABILITY

CHOICE	FREQUENCY	PERCENTAGE
High Charges	6	9.7
Moderate Charges	27	43.5
Free Service	29	46.8
Total	62	100

3.8 SERVICE PROVIDER QUALITIES

The age and sex of service providers did not seem to matter much to respondents because the difference in respondents who wanted to be attended to by service provider of

same sex and whether young or elderly was not significant enough (table 11).

On the other hand 79% of respondents indicated that they wanted to be seen by sympathetic service providers. Gebre observed in Ethiopia that community members preferred traditional healers who in their estimation were perceived as sympathetic and caring [72].

Lasker also stated that uncaring, abusive, inconsiderate and unfriendly attitude of modern health workers may deter use of such facilities [75].

TABLE 11
PREFERENCE FOR SERVICE PROVIDER QUALITIES

	YES	PERCENTAGE (%)	NO	PERCENTAGE (%)
Sympathetic	49	79	13	21
Same sex	36	58.1	26	41.9
Elderly > 45 years	37	59.7	25	40.3

3.9 **CONCEALMENT OF IDENTITY**

23 (37.1%) respondents indicated that they wanted their identity concealed when they had an STD. The others did not mind (table 12). 21 out of the 23 who wished their identity concealed said they would feel embarrassed or ashamed if their identity were revealed. The social stigma attached to STD's has been known since the 15th century [37, 38]. The large percentage who were indifferent about whether or not their identity were concealed may be related to their educational background.

For respondents who did not mind their identity being concealed all of them indicated

their reason as either STDs being ordinary disease or enabling their service provider provide them with better care and if necessary follow up.

TABLE 12

CONCEALMENT OF IDENTIFY

CHOICE	FREQUENCY	PERCENTAGE (%)
Yes	23	37.1
No	39	62.9
Total	62	100

3.10 QUALITY OF CARE

48 respondents (77.4%) in table 13 indicated that they would wish to be treated in a specialized STD clinic while 49 (79%) indicated they would wish to have prior laboratory investigation before being treated for an STD.

TABLE 13

CHOICE FOR SPECIALIZED CLINIC AND LABORATORY SERVICE

	YES	PERCENTAGE (%)	NO	PERCENTAGE (%)
Specialized clinic	48	77.4	14	22.6
Laboratory Inv. prior to treatment	49	79	13	21

Annis concluded that improved levels of utilization seem to depend on improved quality

of care [76]. Ben Youssef and Wessen also stated that quality of care is multifaceted and may involve big buildings, clean and comfortable clinic environment, sophisticated laboratories, drug availability and attitude of staff [60].

The 77% and 79% respectively who wished to use specialized clinics and laboratory will seem to correlate with the 62% who did not mind their identity not concealed. This is because attending a specially labeled clinic automatically gives one up as having an STD or a related problem. In rural Ethiopia people bypassed the referral system to better equipped hospitals for basic health care in spite of long distances [77].

Waiting time did not seem to bother respondents much. 56% of respondents said a short waiting time would affect their choice of treatment source while the other 44% did not mind (table 14). Commercial sex workers particularly may not want to spend long periods of time as this is an indirect cost [8]. Probably for students long waiting time is not viewed as a financial cost.

TABLE 14

FACTORS AFFECTING CHOICE OF STD TREATMENT FACILITY

	YES	PERCENTAGE (%)	NO	PERCENTAGE (%)
Short waiting time	35	56.5	27	43.5
Drug availability	41	66.1	21	33.9
Confidentiality	35	56.5	27	43.5

Confidentiality was a factor affecting choice of STD treatment source in 56.5% of

respondents (table 14). The other 44% were not critical about confidentiality. In Ethiopia however it was found out that getting care from a government health clinic was often the last recourse for therapy. The reasons cited include the stigma of STD clinics and lack of privacy among others [7].

Drug availability was cited as a factor affecting choice of STD treatment source in 66% of respondents. The non availability of drugs has been known to affect the choice of treatment source in Ghana and elsewhere [64, 73].

A study in Cameroon also came up with similar findings where increased utilization of health services occurred with improved quality of care especially with steady availability of drugs [78].

3.11 **ASSESSMENT OF STD SERVICES**

On the issue of assessment of STD services, 59 out of 62 respondents (95%) assessed STD services provided by allopathic practitioners as either excellent or satisfactory (table 15). Only one respondent assessed STD service by allopathic practitioners as poor.

On the other hand 50% of respondents assessed traditional treatment of STDs as poor (table 14). Only 22% of respondents indicated that service provided by traditional practitioners was either excellent or good.

TABLE 15
ASSESSMENT OF STD SERVICES

	ALLOPATHY		TRADITIONAL	
	FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
Excellent	43	69.4	2	3.2
Good	16	25.8	12	19.4
Fair	2	3.2	17	27.4
Poor	1	1.6	31	50.0
Total	62	100	62	100

Formal education may have contributed to this finding. Ben Youssef and Wessen made a similar finding in Tunisia [60] as did Twumasi in Nigeria [62]. Ademuwagum however observed that formal education did not have any influence on the pattern of health care utilization.

CHAPTER 4

CONCLUSION/RECOMMENDATIONS

The study has brought to the fore the fact that even though the majority of respondents were aware of STDs, the mode of contraction and the consequences of non/improper treatment, treatment for STD episodes was sought outside the hospital/clinic.

Some reasons for this observation relate to cost of service by the formal sector which appears relatively high to respondents majority of whom wished to have treatment free of charge. Certain qualities of service providers (especially a provider who is sympathetic, non-judgmental and caring also) accounted for the non-use of the hospital/clinic services. The stigma attached to STDs also prevented some respondents from seeking care in hospitals/clinics because they could not guarantee confidentiality and privacy. On the other hand self medication, use of chemical shops or herbalist seemed to ensure the anonymity of respondents and hence their use instead of clinics/hospitals.

Majority of respondents preferred specialized clinics and also wished that respondents had a laboratory examination prior to treatment. Since these laboratory facilities are non-existent in the majority of health facilities respondents tended to seek care elsewhere.

The study findings confirm the hypothesis that “Treatment seeking behaviour in STDs is both a function of attitudes towards the disease and sex and the issues of accessibility and

quality of health care facilities that deal with STDs”. The objectives set out were also achieved by the study.

From the foregoing the following recommendations are made:-

- i. Re-orient attitude of health workers especially doctors and nurses so that they would be more sympathetic and non-judgmental to STD clients. Extensive training in this regard will be required.
- ii. Ensure privacy and confidentiality in hospitals/clinics for STD care. This involves provide private consulting rooms and instructing chaperons to be confidential.
- iii. Train chemical sellers in current treatment of STDs and encourage them to convince STD clients to seek counseling and further education on STDs.
- iv. To emphasize on safer sexual practices among adolescent students. This can be done through extensive education.

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APPENDIX 1**QUESTIONNAIRE****TOPIC: STD TREATMENT SEEKING BEHAVIOR AMONG ADOLESCENT STUDENTS IN ASUOGYAMAN DISTRICT**

Instructions: Please answer every question as honestly as possible.
Do not leave any question unanswered. You may select more than one choice where appropriate.

Respondent Number: _____ Date: _____

BACKGROUND INFORMATION

1. Age of respondent: _____
2. Sex: _____
3. Class: _____
4. Religion Protestant []
 Pentecostal []
 Catholic []
 Pagan []
 Other (state) _____
5. Usual place of residence

Urban []
Rural []
- b. **KNOWLEDGE ABOUT STDs**
6. Have you heard about Sexually Transmitted Diseases (STDs)

Yes [] No []

7. Name any STD that you know of: _____

8a. How does one contract an STD

- a. By having sex with an infected person []
- b. From the water closet (W.C.) seat []
- c. By sharing underpants of infected person []
- d. Through bewitchment []
- e. Other (state) _____

b. How may an STD present or manifest?

9. If you contract an STD and you do not treat it properly what may happen to you.

- a. Nothing
- b. Develop complication e.g. infertility
- c. Death

SOURCE OF STD TREATMENT

10. Where can one seek treatment when one contracts an STD?

- a. Hospital/Clinic []
- b. Chemical Shop/Pharmacy []
- c. A nurse acquaintance []
- d. Herbalist []
- e. Friends/Peers []
- f. Other (state) _____

11. If you had an STD where would you prefer to go for treatment?

12. Why would you select the choice you made in question 11?

13. When should you seek treatment if you contract an STD?

- a. Immediately []
- b. After a few days []
- c. After failed self medication []

14. If you had an STD under which of the following conditions would you wish to be treated?

- a.
 - i. Nearby service provider []
 - ii. Service provider away from you []
 - iii. Health worker coming to your school []
 - iv. Other (state) _____
- b.
 - i. Service provider in a neighborhood where you are not known []
 - ii. Service provider in a nearby neighborhood []
 - iii. Other (specify) _____
- c.
 - i. Service provider who charges very high []
 - ii. Service provider whose charges are moderate []
 - iii. Free STD service []
 - iv. Other (specify) _____

QUALITY OF SERVICE

15. What qualities of service provider would you prefer to treat you if you contract an STD.

	YES	NO
a. Sympathetic		
b. Same sex as you		
c. Elderly > 45 years		
d. Young < 45 years		

16a. Would you want to conceal your identity when you go for STD treatment.

Yes []

No []

b. Give reason(s) for your answer to 16(a).

17. Would you want to seek STD treatment in

a. Specialized STD clinic? []

b. General clinic offering STD service? []

18. Would you prefer to be treated for an STD.

a. After laboratory investigation []

b. After history and clinical examination []

19. Which of the following factors will affect your choice of STD treatment facility.

	YES
a. Short waiting time	
b. Availability of drugs	
c. Confidentiality	

ASSESSMENT OF STD SERVICES

20. What is your assessment of the STD service provided by

- a. Hospitals/clinics

Excellent []
 Good []
 Fair []
 Poor []

- b. Traditional practitioners e.g. herbalists

Excellent []
 Good []
 Fair []
 Poor []

21. Have you contracted an STD yourself before?

Yes []
 No []

22. If yes, where did you receive treatment?

- a. Self medication []
- b. Clinic/Hospital []
- c. Chemical shop []
- d. Herbalist []
- e. Other (specify) _____

Thank you for your answers.